

CLAIMS

What is claimed is:

Sub A

1. A multi-lingual tag extension mechanism for providing tag library extension functionality, the mechanism comprising:
 - 2 a doStart () method;
 - 4 a doBody () method; and
 - 5 a doEnd () method.
- 1 2. The mechanism of Claim 1, wherein the body is evaluated as a BodyEvaluation object, which is passed into the doBody () method.
- 1 3. The mechanism of Claim 2, wherein the doBody () method returns "true" if more body evaluations are needed.
- 1 4. The mechanism of Claim 2, wherein the doStart method returns a boolean value.
- 1 5. The mechanism of Claim 2, wherein the doStart method returns an integer value.
- 1 6. The mechanism of Claim 2, wherein the doStart () method is first invoked with attribute value data, and returns a boolean value indicating if a body needs to be evaluated.
- 1 7. The mechanism of Claim 3, wherein when no more body evaluations are needed, the doEnd () method is evaluated, and any scripting variables which have been created or updated are synchronized.
- 1 8. The mechanism of Claim 7, wherein the doBody () evaluations are nested.
- 1 9. The mechanism of Claim 1, wherein a tag structure corresponding to an original scripting page is preserved during a page translation.
- 1 10. The mechanism of Claim 9, wherein the mechanism is implemented in a JavaServer Pages environment.
- 1 11. The mechanism of Claim 10, wherein the doEnd () method returns a value indicating whether to continue processing the page.

1 12. The mechanism of Claim 2, wherein the BodyEvaluation object does not contain
2 an entire closure context.

1 13. A method for processing an action in a Web page to provide tag library extension
2 support, the method comprising:

3 creating a doStart () method;
4 creating a doBody () method; and
5 creating a doEnd () method.

1 14. The method of Claim 13, wherein a BodyEvaluation object is passed to the
2 doBody () method for processing.

1 15. The method of Claim 14, wherein the doStart () method is first invoked with
2 attribute value data, and returns a boolean value indicating if a body needs to be evaluated.

1 16. The method of Claim 14, wherein attribute values are set using a Java Bean
2 mechanism.

1 17. The method of Claim 14, wherein the doBody () method returns "true" if more
2 body evaluations are needed.

1 18. The method of Claim 17, wherein when no more body evaluations are needed, the
2 doEnd () method is evaluated, and any scripting variables which have been created or updated
3 are synchronized.

1 19. The method of Claim 18, wherein the doBody () evaluations are nested.

1 20. The method of Claim 14, wherein the method is implemented in a JavaServer Pages
2 environment.

1 21. The method of Claim 14, wherein the doBody () method comprises a doInitBody ()
2 method and a doAfterBody () method, and wherein the doInitBody () method is executed only
3 during a first iteration of the body evaluation.

1 22. A method for translating an action tag in a JavaServer Page, wherein the method
2 provides support for multiple scripting languages, the method comprising:

3 (a) generating and storing code for any attribute values in a tag instance;
4 (b) instantiating the tag;
5 (c) invoking a doStart () method;
6 (d) creating a BodyEvaluation object if necessary;
7 (e) If a (evaluate_body) result is true, then
8 (i) invoking a doBody () method on the BodyEvaluation object;
9 (ii) if the doBody() method returns true, then goto (e)
10 (f) invoking a doEnd () method on the tag of the tag instance; and
11 (g) synchronizing any indicated scripting variables.

1 23. A computer readable medium including computer program code for providing a

2 multi-lingual tag extension mechanism, the computer readable medium comprising:

3 computer program code for invoking a doStart () method;
4 computer program code for invoking a doBody () method; and
5 computer program code for invoking a doEnd () method.

1 24. A computer system providing a multi-lingual tag extension mechanism, the

2 computer system comprising:

3 a procesor; and

4 a computer program operating on the processor to translate an action tag, the computer
5 program including computer program code for invoking a doStart () method, a doBody ()
6 method, and a doEnd () method for each action tag in a Web page.

1 25. A method of providing a tag library interface mechanism, the method comprising:

2 providing a doStart () method;

3 providing a doBody () method; and

- 4 providing a doEnd() method;
- 5 wherein a tag can be translated in an "in-line" manner without knowledge of the
- 6 scripting language and without using a closure.